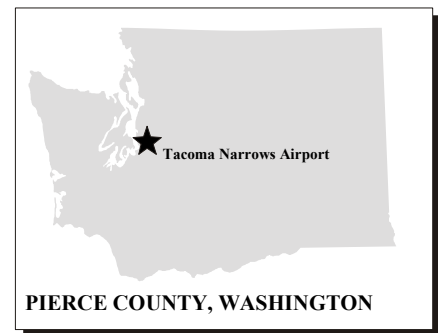




**AIRPORT: Tacoma Narrows (TIW)
ASSOCIATED CITY: Tacoma
ARC: C-I
REGION: Central Puget Sound**

AIRPORT DATA AND FACILITIES

The Tacoma Narrows Airport is located in Pierce County, four miles west of Tacoma. The Airport has 170 based aircraft, including 128 single-engine, 23 multi-engine piston-powered, 12 turboprops, and 7 turbojets. The latest available data indicate that Tacoma Narrows had a total of 51,318 annual operations.



Runway 17-35 is the Airport's only runway. This runway is 5,002 feet long, 150 feet wide, has an asphalt surface, and is equipped with medium intensity runway lights. The Runway is equipped with precision approach path indicators, as well as a medium intensity approach lighting system with runway alignment indicator lights, which, in conjunction with an instrument landing system, provide this runway end with a CAT I precision approach. This runway end also has a GPS approach.

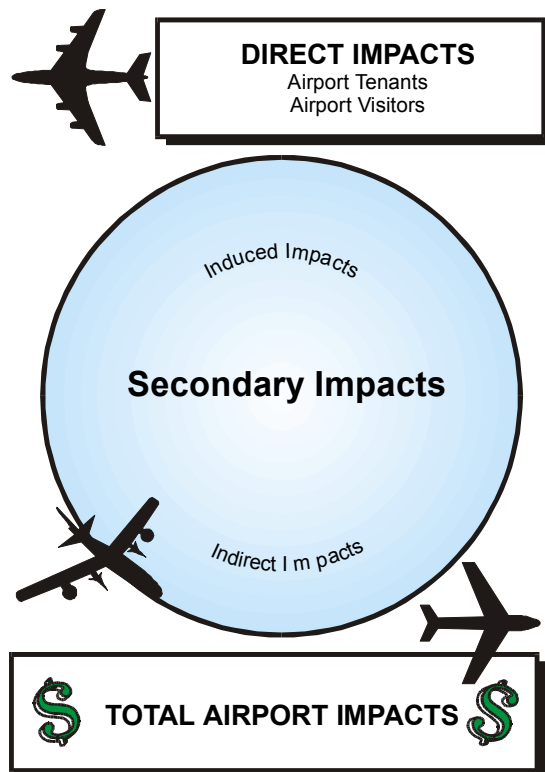
Runway 35 is equipped with runway end indicator lights, as well as visual approach slope indicators which provide pilots with vertical guidance to the runway. This runway end has published NDB and GPS non-precision approaches.

ECONOMIC IMPACTS

The economic impacts of Washington's airports were calculated using a methodology which has evolved over the past decade and is nationally recognized as the standard for conducting economic impact studies of airports. The methodology is consistent with analytical models used by the Federal Aviation Administration (FAA), and employs the use of direct survey information and an input/output model (IMPLAN) as developed by the U.S. Department of Commerce to determine multipliers specific to the state of Washington for "secondary" economic impacts.

Types of Economic Impact - This study identified and examined those aviation activities at the public use airports in Washington that created economic impacts. These impacts are generated in three ways: **1) Direct**, **2) Indirect**, and **3) Induced Effects**. Combined, the three impact types yield the total economic impacts of an airport, as described below:





DIRECT ECONOMIC IMPACTS

These economic impacts occur as a consequence of providing aviation services. These impacts usually occur at the airports, and comprise the financial expenditures by firms which carry passengers (air carrier, air charter or air taxi) or cargo; firms which serve the air carrier and general aviation functions (airport tenants); governmental agencies which support aviation; ground transport firms; and others. In every instance, the impacts include only expenditures where the recipient is located within each airport's service area.

In addition to the Airport's staff, aviation-related tenants include the Avionics Shop, Inc.; Pavco Flight Center, Zephyr Aviation, Rotors, and Northwest Aircraft. Approximately 285 visitors arrived at the Airport as a result of general aviation

operations. The total combined direct output of on-airport tenants and general aviation operations was approximately \$13,763,898. These first-round expenditures were responsible for 231 jobs and wages of \$5,438,147.

INDIRECT ECONOMIC IMPACTS (Secondary Impact)

These economic impacts occur as a result of the use of aviation service. They include the regional expenditures made by air passengers who visit the region (at hotels, restaurants, ski facilities, etc.); expenditures by the region's residents associated with their use of aviation; and expenditures by firms having economic activity which is dependent on the airport. These indirect impacts accounted for output of \$2,611,112, approximately 39 jobs, and \$901,244 in wages.

INDUCED ECONOMIC IMPACTS (Secondary Impacts)

The "indirect" and "direct" impacts represent increases in regional final demand. Such increases do not represent total economic impact; there is also a "multiplier" effect. This multiplier effect comprises the local value of money as it circulates through the local economy and as individuals or firms associated with airport business buy goods and services in the local economy. Induced impacts accounted for output of \$3,916,087, approximately 57 jobs, and wages of \$1,291,514. Each airport's total economic impact is the sum of the three types of impacts.





TOTAL ECONOMIC IMPACTS

The total economic impact across the state were quantified by adding together the direct, indirect and induced impacts for each airport, and interpreting, comparing, and presenting the results.




The output of the IMPLAN model enabled the presentation of total economic impacts by airport in terms of three economic impact measures: 1) jobs (employment); 2) earnings (payroll), and; 3) economic activity (output). Each of these was determined based on individual multipliers per industry categories. In each case, total impacts include the aviation sector itself, as well as the "multiplier effect" of the aviation sector. The impacts were estimated using Year 1998 data.

All three indicators of economic impact are useful; however, the monetary measures should not be added together, as discussed below:

- **Jobs (Employment)** - The number of employees who are employed in the aviation industry, plus the aviation-oriented share of those that are employed in sectors that support the air passenger (hotels, restaurants, etc.) plus those employed in the industries included in the multiplier effect impacts. The number of jobs attributable to an industry is always greater than simply those in the industry itself, due to the "re-spending" of money. Total employment impact was approximately 328 jobs.
- **Labor Earnings (Payroll)** - The sum of the wages and salaries to all employed persons that the aviation industry pays, directly or indirectly, to deliver the output of final aviation demand. Earnings Impacts are always included in the Economic Activity totals, so they should not be summed with the Economic Activity impact. Earnings are a very conservative proxy for "value added." Earnings may be greater or less than the Direct and Use values depending on the industry type. Total earnings impact was approximately \$7,630,905.
- **Economic Activity (Sales Output)** - The value of the aviation final demand (aviation or airport service), plus the "multiplier" effect (the sum of all of the intermediate goods and services needed to produce the aviation final demand, plus the induced impacts of increased household consumption). Total economic activity equals the sum of intermediate demands, consumption demand, government demand, investment demand, and net export demand. Economic Activity is always larger than both the Direct and Use values because it includes the multiplier effect. Total economic activity impact was \$20,291,097.





	Direct Impacts	+	Indirect Impacts	+	Induced Impacts	=	Total Impacts
Jobs (Employment)							
	Number of Jobs Supported		Number of Jobs Supported		Number of Jobs Supported		Total Number of Jobs Supported
	231.2		39.2		57.3		327.8
Labor Earnings (Payroll)							
	Annual Salary Supported		Annual Salary Supported		Annual Salary Supported		Total Annual Salary Supported(Dollars)
	\$5,438,147		\$901,244		\$1,291,514		\$7,630,905
Economic (Sales Output)							
	Contribution to Economy (Dollars)		Contribution to Economy (Dollars)		Contribution to Economy (Dollars)		Total Contribution to Economy (Dollars)
	\$13,763,898		\$2,611,112		\$3,916,087		\$20,291,097

SUMMARY

On an annual basis, Tacoma Narrows' tenants and its visitors in Pierce County, Washington contribute the following total annual economic benefit:

Jobs (Employment)	Labor Earnings (Payroll)	Economic Activity (Sales Output)
		
Total 327.8	Total \$7,630,905	Total \$20,291,097

